

## Optical Spectroscopy of Octahedral Impurity Yb<sup>3+</sup> Ions in a CsCaF<sub>3</sub> Crystal

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### Abstract

Optical spectra of a CsCaF<sub>3</sub> crystal doped with Yb<sup>3+</sup> ions are experimentally separated into groups of lines corresponding to different impurity centers formed by the Yb<sup>3+</sup> ions introduced to sites with the hexagonal and dodecahedral environment of ligands. In the spectra of octahedral centers, the lines related to the cubic and trigonal centers are identified. The empirical energy level diagrams are constructed for impurity centers of both types, from which parameters of the relevant crystal fields are found.

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